STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
STATE PLANNING COORDINATION

December 22, 2005

Mr. Garth Jones
Becker Morgan
309 South Governors Avenue
Dover, DE 19904

RE: PLUS review – PLUS 2005-11-15; Warren Property

Dear Mr. Jones:

Thank you for meeting with State agency planners on November 30, 3005 to discuss the proposed plans for the Warren property project to be located on the south side of Big Oak Road between US. Route 13 and SR 1

According to the information received, you are seeking a rezoning from AC to RM for 120 residential apartments to be located on 12 acres. A comprehensive plan amendment will be required. We understand that it is Kent County's practice to process rezonings and the related comprehensive plan amendments concurrently. In accordance with Kent County's procedures, this PLUS review considered both the rezoning and any associated plan amendment needed to process the application.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Kent County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed Development of this project in accordance with the relevant County codes and ordinances.

Street Design and Transportation

- The developer should be required to contribute toward improvements to provide a separate left-turn and shared left-turn, through and right-turn lanes as well as striping required on the eastbound Brenford Road and westbound Big Oak Road approaches.

- The developer will be required to provide a noise study demonstrating that their plan provides adequate mitigation for the effects of highway noise from Delaware Route 1.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: David Edgell 739-3090

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We encourage the County and the applicant to consider using Kent County's TDR ordinance rather than pursing the rezoning.

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

Nothing is known within this parcel. This was part of the archaeological study area for the Rt. 1 corridor, and nothing was identified or expected here at that time. There is one historic house (K-3944) at Big Oak Corners, but it is not visible from this parcel due to intervening development.

This project will not affect any historic properties.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

1) Big Oak Road is classified as a local road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

2) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.

3) DelDOT will require the developer to improve Big Oak Road to meet DelDOT's standard typical section for local roads for the length of the site frontage. These improvements should include two eleven-foot travel lanes and two five-foot shoulders and possibly overlaying the existing through travel lanes. DelDOT will analyze the through travel lanes' pavement section and recommend an overlay thickness to the developer's engineer if it is needed.

4) The developer should be required to contribute toward improvements to provide a separate left-turn and shared left-turn, through and right-turn lanes as well as striping required on the eastbound Brenford Road and westbound Big Oak Road approaches. There are currently four other developers, all west of Route 13, participating in this improvement.

5) The developer's site engineer should contact Mr. Brad Herb, the project manager for Kent County, regarding specific requirements for access. He may be reached at (302) 266-9600.

6) The developer will be required to provide a noise study demonstrating that their plan provides adequate mitigation for the effects of highway noise from Delaware Route 1. Preliminarily, it appears that the developer has addressed this issue

adequately by placing the buildings away from Route 1. However, a study will be required nonetheless. Mr. Herb can provide information on firms that do such studies.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Soils

According to the Kent County soil survey, Sassafras and Matapeake were mapped on subject parcel. Sassafras and Matapeake are both well-drained upland soils that, generally, have few limitations for development.

Impervious Cover

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Leipsic River watershed, at that time, had about 5.1 percent impervious cover. Although this data is almost 4 years old and likely an underestimate - it illustrates the importance of a proactive strategy to mitigate for predictable and likely cumulative environmental impacts. Since the amount of imperviousness generated by this project (reported as 46 %) is significantly above the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover via preservation or additional tree plantings – are examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

TMDLs

A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited water body can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting. Although TMDLs as a "pollution runoff mitigation strategy" to reduce nutrient loading have not yet been developed for the Leipsic River watershed to date, work is continuing on their development and they should be completed by December 2006. Therefore, until the specified TMDL reductions and pollution control strategies are adopted, it shall be incumbent upon the developer to employ best available technologies (BATS) and/or best management practices (BMPs) as "methodological mitigative strategies" to reduce

degradative impacts that might be associated with this project. Reducing imperviousness, planting/preservation of trees, maintaining a 100-foot upland buffer width between lot parcel lines and wetlands and streams (where applicable), and the use of "green-technology" stormwater management techniques - are some examples of proactive mitigative strategies that will help reduce excessive nutrient runoff from this development and it impacts on water quality, while ensuring State compliance with imminent Federal TMDL regulatory requirements.

Water Supply

The project information sheets state water will be provided to the project by Artesian Water Company via a central water system. DNREC records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 04-CPCN-01.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

Requirements:

1. Land disturbing activities in excess of 5,000 square feet are regulated under the Delaware Sediment and Stormwater Regulations. A detailed sediment and stormwater management plan must be reviewed and approved by the Kent Conservation District prior to any land disturbing activity (i.e. clearing, grubbing, filling, grading, etc.) taking place. The review fee and a completed Application for a Detailed Plan are due at the time of plan submittal to the Kent Conservation District. Construction inspection fees based on developed area and stormwater facility maintenance inspection fees based on the number of stormwater facilities

are due prior to the start of construction. Please refer to the fee schedule for those amounts.

2. The following notes must appear on the record plan:

    - The Kent Conservation District reserves the right to enter private property for purposes of periodic site inspection.
    - The Kent Conservation District reserves the right to add, modify, or delete any erosion or sediment control measure, as it deems necessary.
    - A clear statement of defined maintenance responsibility for stormwater management facilities must be provided on the Record Plan.

3. Ease of maintenance must be considered as a site design component and a maintenance set aside area for disposal of sediments removed from the basins during the course of regular maintenance must be shown on the Record Plan for the subdivision.

4. All drainage ways and storm drains should be contained within drainage easements and clearly shown on the plan to be recorded by Kent County.

5. Limited tree clearing must be considered by the designer.

Comments:

1. The submitted plus plans are indicating stormwater management is going to be accomplished by a joint basin shared by the Warren property and a joining property. Verification must be provided that the existing basin can handle the extra drainage from the Warren property.

2. The designer is encouraged to consider the conservation design approach and limit the amount of tree clearing required for the development of the site including the stormwater management facilities shown in the wooded areas.

3. A letter of no objection to re-recordation will be provided once the detailed Sediment and Stormwater Management plan has been re-approved.

4. Proper drainage of developed lots and active open space should be considered in the development of the grading plan for this subdivision.

5. Based on the site characteristics, a pre-application meeting is suggested to discuss stormwater management and drainage for this site.

Drainage

The Drainage Program requests that all precautions are taken to ensure the project does not create any off site drainage problems downstream of this project by the release of on site storm water.

Open Space

The proposed site plan includes 6.5 acres of open space. Traditional maintenance of open space in the form of turf grass can be expensive and labor intensive. In areas set aside for open space, the developer is encouraged to consider establishment of meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Recreation

DNREC recommends that sidewalks be built fronting at least one side of residential streets and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, Big Oak Park, public mass transit stops, schools, stores, work, etc.

The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high and moderate facility needs in Kent County are listed below. Consideration should be given to incorporate some of these recreation opportunities into the project. For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-9235.

High priorities are Walking or Jogging Paths, Bike Paths, Swimming Pools, Picnic Areas, Playgrounds and Fishing Areas. Moderate priorities are Skate Facilities, Hiking Trails, Baseball/Softball Fields, Campgrounds, Soccer Fields, Volleyball Courts, Basketball Courts and Canoe/Kayak Access.

Underground Storage Tanks

There are two inactive LUST sites located near the proposed project:

Paradise Florist, Facility # 1-000538, Project # K8603019
Willis Chevrolet Inc., Facility # 1-000031, Project # K9103053

No environmental impact is expected from the above inactive LUST sites. However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 9.2 tons (18,418.7 pounds) per year of VOC (volatile organic compounds), 7.6 tons (15,249.5 pounds) per year of NOx (nitrogen oxides), 5.6 tons (11,251.3 pounds) per year of SO2 (sulfur dioxide), 0.5 ton (1,001.6 pounds) per year of fine particulates and 770.4 tons (1,540,704.8 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 3.7 tons (7,429.1 pounds) per year of VOC (volatile organic compounds), 0.4 ton (817.4 pounds) per year of NOx (nitrogen oxides), 0.3 ton (678.3 pounds) per year of SO2 (sulfur dioxide), 0.4 ton (875.4 pounds) per year of fine particulates and 15.1 tons (30,116.0 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.5 tons (2,944.4 pounds) per year of NOx (nitrogen oxides), 5.1 tons (10,241.3 pounds) per year of SO2 (sulfur dioxide) and 755.3 tons (1,510,588.8 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	9.2	7.6	5.6	0.5	770.4
Residential	3.7	0.4	0.3	0.4	15.1
Electrical Power		1.5	5.1		755.3
TOTAL	12.9	9.5	11.0	0.9	1540.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.5 tons of nitrogen oxides per year and 5.1 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, http://www.energystar.gov/:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment."

The energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal's Office – Contact: John Rossiter 739-4394

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office.

- **The DE State Fire Marshal's Office has no objection to the re-zoning.**

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
   - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Apartments)
   - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
   - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
   - Buildings greater than 10,000 sq.ft., 3-stories of more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
   - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
   - Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility**
   - All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Big Oak Road must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
   - Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes**:
   - Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
   - Proposed Use
   - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
   - Square footage of each structure (Total of all Floors)
   - National Fire Protection Association (NFPA) Construction Type
   - Maximum Height of Buildings (including number of stories)
   - Note indicating if building is to be sprinklered
   - Name of Water Provider
   - Letter from Water Provider approving the system layout
   - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
   - Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

Neither the Delaware Department of Agriculture nor the Delaware Forest Service has any objections to the Warren Property application. The site is located on a long-range designated controlled development area. The *Strategies for State Policies and Spending* encourages environmentally responsible development in areas within a Growth Level 2 Zone. We request that you consider limiting impervious cover as much as possible when designing this site. This site is a part of a "good recharge" area. The State of Delaware has mapped all ground water potential recharge areas. A "good" rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in "Excellent" and "Good" recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as "excellent" and "good" recharge areas adversely impacts the future prospects for agriculture in Delaware.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This

will help to meet the community's forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

This proposal is to develop 120 units on 12 acres located on the south side of Big Oak Road between US 12 and Route 1. According to the State Strategies Map, the proposal is located in an Investment Level 2 area. DSHA supports this proposal because the elderly is among the fastest growing segment of Delaware's population. Moreover, the elderly need living environments that help them remain active and independent.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland, AICP
Director

CC: Kent County